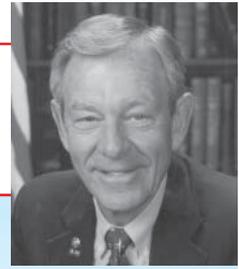

The Jeffords/Lieberman Multi-Emissions Proposal:

An Irresponsible Plan That Will Destroy Jobs and the U.S. Economy



By: Senator George V. Voinovich

The U.S. relies heavily on fossil fuel combustion for the vast majority of its electricity generation. In addition to providing low-cost and reliable electricity, these power plants emit harmful substances into the air that impact public health and the environment. When Congress established the Clean Air Act in 1970, it included minimum national standards for utility emissions in order to improve air quality.

Since its enactment, the Act has been amended several times and has resulted in significant reductions of nitrogen oxide (NO_x) and sulfur dioxide (SO₂) from electric utilities. Despite this success, several studies have shown that further reductions of NO_x and SO₂ are essential to, among other things, curb acid rain, reduce ground-level ozone, and decrease concentrations of particulate matter.

Additionally, there has been an ongoing debate on the need to reduce emissions of mercury and carbon dioxide (CO₂). Mercury has been proven to bioaccumulate in fish and animal tissue in a highly toxic form, and it can cause health impacts. CO₂, however, is not a pollutant in the traditional sense but is linked to the highly uncertain and controversial issue of climate change.

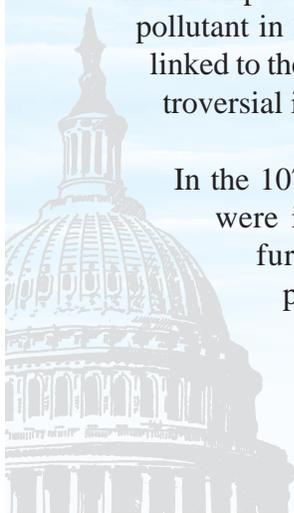
In the 107TH Congress, several bills were introduced to provide for further reductions of power plant emissions. However,

the approach taken by Senators James Jeffords (I-VT) and Joseph Lieberman (D-CT) in their proposed legislation S. 556, the Clean Power Act, would have drastic effects on the U.S. economy. This is due in large part to the fact that it will cause massive fuel switching from low-cost and abundant coal to natural gas, which is subject to extremely volatile price swings.

The Jeffords/Lieberman proposal mandates reductions in power plant emissions of NO_x, SO₂, CO₂, and mercury through draconian command and control regulations which are impossible to meet in the timeframe called for in the bill. Although the impact would be the most severe for those regions of our nation whose economies rely on manufacturing, like Ohio, S. 556 would affect many industries causing disastrous consequences to our global competitiveness and our economy. Sadly, the hardest hit by this short-sighted legislation would be low-income and disadvantaged families.

Fuel Switching

Currently, our nation relies on coal for 52 percent of our nation's electricity generation. By far, this is our cheapest and most abundant energy source, with enough domestic supply to meet our country's electricity needs for the next 250 years. Although it is cleaner today than ever before, coal emissions present challenges for air quality. Because coal is an important and necessary part of our energy policy and economic future, our government has provided substantial resources to develop clean coal technologies to make it environmentally friendly.



[SENATOR VOINOVICH'S OHIO RECORD FOR CLEAN AIR] Senator Voinovich is the chairman of the Senate Committee on Environment and Public Works Subcommittee on Clean Air.

Despite the progress to make coal increasingly cleaner, the Jeffords/Lieberman proposal will put coal out of business for two main reasons. First, the bill mandates an unwarranted reduction of CO₂ emissions to 1990 levels, which is about a 20 percent decrease from today's levels. While there is no consensus in the scientific community that such a drastic reduction is justified, this level will effectively eliminate coal as a viable resource for our nation. This is extremely troubling considering our immediate focus on national security and reliance on foreign sources for energy.

Second, the Jeffords/Lieberman bill mandates huge reductions of NO_x (75 percent), SO₂ (75 percent), mercury (90 percent), and CO₂ (1990 levels) all in six years. Additionally, S. 556 includes a "birthday provision," which requires all facilities to install the latest control technology either by January 1, 2013 or before the facility becomes 40 years old. This command and control provision is mandated for all facilities regardless of past investments, fuel use, costs, regional differences, or installed technology. According to the Edison Electric Institute (EEI), 74 percent of our nation's coal

units will be 40 years or older by 2013, and 83 percent by 2018.

Unfeasible and Costly

These timelines and this provision are economically impractical and impossible to implement. If implemented today, all firms would have to invest simultaneously in the latest control technologies. Furthermore, these massive investments would have to occur within six years. The workforce required to install this equipment is not available within the

timeframe of the legislation. Skilled workers from such crafts as the boilermakers, pipefitters, and electricians are needed to install the equipment, but the workers just are not there.

For example, boilermakers have a capacity of 40 million manhours of labor per year. According to one equipment manufacturer, S. 556 would require over 60 million manhours to install the equipment by a six year deadline. It is impossible to recruit the labor force necessary to meet this requirement of S. 556 where after six years these jobs will no longer be needed.

Senator Voinovich's Ohio Record for Clean Air

- Senator Voinovich has been involved in this debate since the early 1970s. As mayor of Cleveland, he operated a 57 megawatt municipally owned utility, Cleveland Public Power.
- Over the last 10 years (during Senator Voinovich's time as governor), Ohio has spent more on emissions reductions than New York, New Jersey, Massachusetts, Connecticut, Vermont, Rhode Island, Maine, New Hampshire, Maryland, Delaware, and Washington D.C. combined.
- Although Ohio produces 4.6 percent of the total U.S. electricity generation, employs 5.8 percent of the nation's manufacturing workforce (733,610 jobs), and produces 6.2 percent of the nation's manufacturing GSP, air toxins in Ohio have been reduced from approximately 381 million pounds in 1987 to 144 million pounds in 1996.

[2020 ALLOWANCES PRICES] EIA (Energy Information Administration) has estimated the expected costs of four different proposals addressing NO_x, SO₂, and mercury reductions. The first three scenarios show 50 percent, 65 percent, and 75 percent reductions in all three pollutants in 11 years (2012). This is contrasted with the reductions in S. 556, which are called for in six years (2007).

These arbitrary timelines are not feasible and are unnecessarily costly. According to the Energy Information Administration (EIA), the costs of reducing NO_x, SO₂, and mercury would be substantially less if there was an 11 year deadline instead of a six year deadline, which are represented by the years 2012 and 2007 in this analysis. For

NO_x, the compliance costs would be \$1,000 less per ton. It is important to note that SO₂ costs are actually less for a six year compliance date because the mercury controls have a side benefit of also reducing SO₂. Yet, a 90 percent reduction of mercury in six years is about five times more costly than a 75 percent reduction in 11 years.

Since coal costs about half as much as natural gas, compliance costs are only one factor in the costs attributed to S. 556. Currently, natural gas provides 16 percent of our nation's electricity. In order to meet the emissions levels and timelines of S. 556, utilities would have to abandon their reliance on coal and switch to natural gas, greatly in-

creasing our reliance on this fuel. As the recent large price swings in natural gas have shown, increased reliance will only put more pressure on this one fuel, causing price fluctuations to occur more frequently.

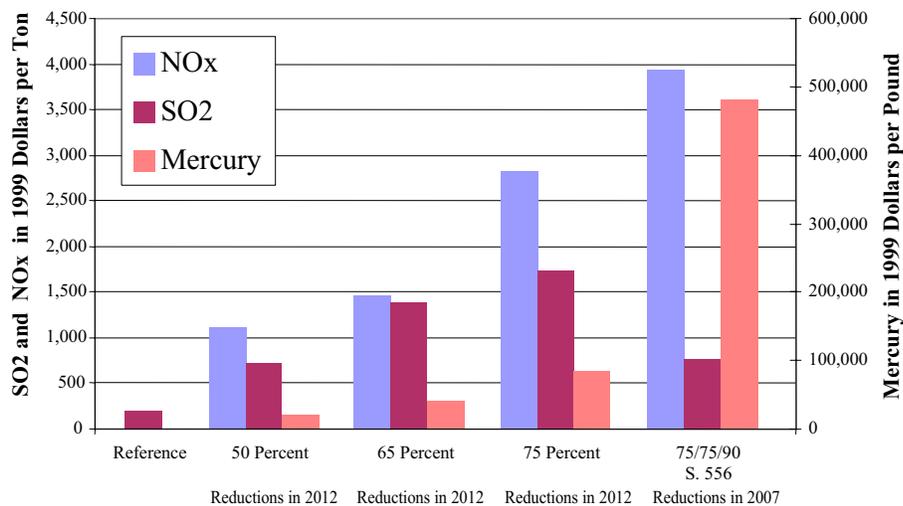
According to EIA, the Jeffords/Lieberman proposal without the birthday provision would increase the

average delivered price of electricity in 2020 by 30 percent, and natural gas prices would increase by 20 percent.

Impacts Across Industries and Regions

Due to its high BTU value and its use as a raw material, natural gas is an extremely valuable commodity. Therefore, increases in natural gas prices have a larger effect than just on electricity prices and the manufacturing industry. In fact, natural gas is used directly by many different industries, including plastics and agriculture, meaning that millions of Americans depend on its reliability and price for their livelihoods.

2020 Allowance Prices



Source: EIA, 2001

[OTHER USES FOR NATURAL GAS] The agriculture industry, which uses natural gas to make fertilizer, employs nearly 3 million people. The steel and metals industry, which uses natural gas for their blast furnaces, employs almost 700,000 people. Using natural gas as a raw material, the chemical, plastics, and polymer industries employs over 2.3 million people, and the food industry, which uses natural gas for food processing and preparation, employs over 11 million people.

Of course, the compliance costs of S. 556 and the higher prices of natural gas will be passed on to the consumers. By applying a one size fits all policy, some regions will be more impacted than others by the increased costs of electricity. Specifically, the effects would be felt the hardest by the Midwest because it is the manufacturing base of our country.

Manufacturing is the lifeblood of our economy. It is centered in the Midwest because this region and its border states of West Virginia, Pennsylvania, Virginia, and Kentucky are the source of low-cost and abundant coal, along with iron ore in the Great Lakes. If the Midwest does not have reasonably priced and reliable energy sources for the manufacturing industry, then these companies will not stay in the U.S. They will take their jobs and go elsewhere in the world, where they can get cheaper labor and electricity.

Therefore, while this has been a regional debate between the Midwest and New England, the fact of the matter is that higher energy prices in the Midwest will have a direct, negative impact on the

economy of the entire nation. The Midwest represents 23 percent of the total U.S. manufacturing GDP with almost 3 million manufacturing jobs. This is compared to New England's 5.6 percent of manufacturing GDP with 615,000 jobs.

When energy prices go up, manufacturing declines and workers are laid off.

Job Loss

S. 556 will directly displace workers in those industries that depend on low-cost reliable electricity from coal, or natural gas as an input. These lost jobs would have a ripple effect across the economy.

Other Uses for Natural Gas	
Industry	Employees
Farming (used to make fertilizer)	2,800,000
Steel and Metal Industries (used to fire blast furnaces)	699,720
Chemicals and Polymers (used as raw materials for chemicals, plastics, and polymers)	2,369,000
Food Processing Services and Preparation (used for food processing and preparation)	11,382,120

Source: 1999 Statistics obtained from Energy Information Administration, U.S. Department of Energy, U.S. Department of Agriculture, U.S. Department of Commerce, and Bureau of Labor Statistics, U.S. Department of Labor, U.S. Department of Chemistry Council

[COMPARISONS] 23 percent of our nation's Gross State Product (GSP) for manufacturing is concentrated in the five states which compromise the Midwest: Ohio, Indiana, Michigan, Illinois, and Wisconsin.

While some people discount such predictions of job losses, past increases in natural gas prices have had a dramatic effect. Specifically, the chemical, polymer, and fertilizer industries were all negatively affected in early 2001 when natural gas prices spiked.

According to the American Chemistry Council, every dollar that the price of natural gas increases translates to about \$1 billion in additional annual cost for the chemical industry, which employs more than one million people directly and 36

million indirectly. Like many industries, these costs cannot be passed on to their customers because companies are competing in a global marketplace. When the price of natural gas is \$4 per unit, the U.S. chemical industry can no longer compete with foreign producers. However, natural gas prices increased to over \$10 a unit in 2001, causing several plant closings.

Additionally, Ohio is the leading producer of polymers, which uses natural gas as a raw material. Since it has a significant effect on the cost of polymers, greater reliance on natural gas as a fuel for electricity would have a decidedly negative impact on our global competitiveness, threatening our domestic industry. When natural gas prices spiked,

many of the polymer companies had a difficult time remaining competitive with their foreign counterparts.

Furthermore, natural gas is a major ingredient in the production of fertilizers. In early 2001, fertilizer companies, who had purchased natural gas contracts in advance, sold their natural gas on the market at a higher price instead of making fertilizer. As a result, there was less fertilizer in the market

which increased the price, causing some farmers to either not plant crops or forego the use of fertilizer, which reduced yields.

Impacts on the Disadvantaged

These recent experiences foreshadow the extreme effects that S. 556 would have on individual consumers. A study by the Edison Electric Institute (EEI) concluded that by causing fuel switching to natural gas the Jeffords/Lieberman proposal would result in an overall reduction in our Gross Domestic Product (GDP) of \$75 billion by the year 2010 and \$150 billion in 2020. The country would lose more than 600,000 jobs by 2010 and more than 900,000 jobs by 2020. Additionally, national household earnings would decline by up to \$550 annually.



[COST MATTERS] The Department of Energy (DOE) reports that an individual or family making less than \$10,000 a year will spend 29 percent of their income on energy.

For Ohio, S. 556 would result in a reduction in the state's GSP of \$3 billion by the year 2010 and \$6 billion in 2020. Ohio would lose more than 25,000 jobs by 2010 and more than 37,000 jobs by 2020. The EEI analysis projects that Ohio families would pay \$494 million more for electricity by 2010 and more than \$1.1 billion by 2020.

According to EIA, the bill would increase electricity costs for industrial users by 45 percent, commercial users by 37 percent, and residual consumers by 26 percent.

Although high electricity prices would severely impact businesses and their ability to compete in the global marketplace, it will have a more profound affect on low-income families and the elderly. Everyday many Americans are forced to make choices between electricity or paying for food when energy prices are high. It is troubling to consider the effects of the Jeffords/Lieberman proposal on the elderly and low-income families who are already struggling to survive.

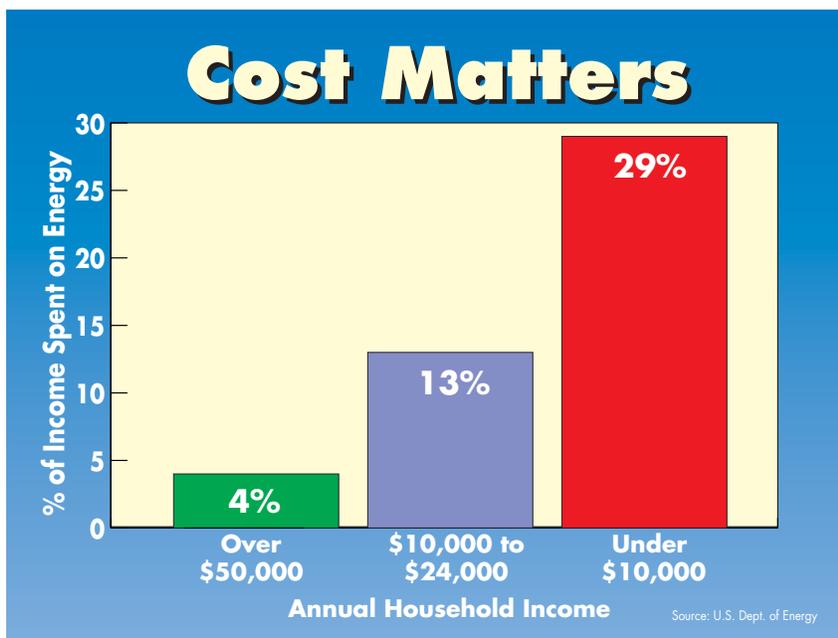
At an Environment and Public Works hearing on the costs and benefits of S. 556, Thomas Mullen

of Catholic Charities and Health and Human Services of Cleveland, Ohio expressed concern about how children would be impacted by S. 556. "In Cleveland, over one-fourth of all children live in poverty and are in a family of a single female head

of household. These children will suffer further loss of basic needs as their moms are forced (under S. 556) to make choices of whether to pay the rent or live in a shelter; pay the heating bill or see their child freeze; buy food or risk the availability of a hunger center.

These are not choices any senior citizen, child, or, for that matter, person in America should make."

Regrettably, some Americans must make these choices each day. The Center for Disease Prevention and Control (CDC) states that more people, specifically the elderly and children, died from heat exposure (8,015) from 1979 to 1999 then from hurricanes, lightning, tornadoes, floods, and earthquakes combined. The CDC also claims that air conditioning is the number one preventive factor against heat exposure. Due to the projected increase in electricity costs under S. 556, fewer people would turn on their air conditioners and the impacts would be more severe.



[OHIO RECORD *continued*] Senator Voinovich spent considerable effort to bring Ohio counties into attainment with the Clean Air Act.

Conclusion

Congress should act quickly to develop a strategy for further reducing power plant emissions in order to improve public health and protect the environment, provide better regulatory certainty, and ensure continued access to safe, reliable, low-cost electricity. By causing fuel switching away from coal, the Jeffords/Lieberman proposal would cause natural gas price increases that would negatively affect a wide variety of industries and displace people from their jobs. S. 556 would be disastrous to our nation's economy and manufacturing industries - like a tornado sweeping across the country, leaving in its wake unemployed individuals and ruined manufacturing facilities.

For years, the discussion on utility emissions has resulted in a regional debate between the Northeast and the Midwest. What is lost in the debate is the fact that an economic hit on one region has a ripple effect across the entire country. Given this symbiotic relationship, it is all the more important that everyone work together to achieve the goal of a clean environment and reasonable energy costs for American consumers.

Due to the various projections of the Jeffords/Lieberman proposal, more time should be spent on this issue. Perhaps most importantly, there needs to be a better understanding of what different reduction levels and timelines would mean to consumers and our nation's economy. Currently, there is even uncertainty on whether the technologies are available for the reductions mandated in the bill.

The Jeffords/Lieberman bill would cost a great deal to our consumers, businesses, and it would have a devastating impact on the U.S. economy. Without a doubt,

many people will lose their jobs if this bill is enacted. For these reasons and due to the fact that S. 556 would never reach the floor of the Senate because of the CO₂ provisions, both sides need to come together to craft a sensible bill that makes real reductions today of NO_x, SO₂, and mercury. Real reductions in these three pollutants can be made which will greatly improve our environment and provide low-cost and reliable electricity to our nation's consumers.

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Ohio Record *continued*

When Senator Voinovich began his term as governor, 28 Ohio counties were in non-attainment for ozone.

He convinced American Electric Power to install scrubbers costing \$616 million dollars to reduce SO₂ emissions at the Gavin facility, the largest coal-fired power plant in the country.

He also implemented an automobile emissions testing program, called E-check. When Ohio's General Assembly passed a bill to remove the program, Senator Voinovich vetoed it.

Thanks to these efforts, all 88 Ohio counties have met the National Ambient Air Quality Standard requirements of the Clean Air Act.

